

Reinvent NASA Option

End State Description: The **Reinvent NASA Option** focuses on user responsiveness. This is best achieved through unification of STS/ISS Utilization Management activities by the creation of a new enterprise (Code Z). This Option will provide greater advocacy and visibility to the Agency, the Science/Technology/Commercial (S/T/C) user community, and the public through its three divisions, which have responsibility for:

- STS/ISS Commercial Utilization (manages the commercial customers of Shuttle and Station)
- STS/ISS Education and Outreach (provides consolidation and focus as integrated archiving for STS/ISS research)
- STS/ISS Payloads (provides STS/ISS tactical manifesting and mission management functions). Within the Payloads Division there will be Customer Focus and Smart Integration Teams that isolate the researcher from the process and focus on the researcher as a customer.

The end state organization is illustrated in Figure 1, along with associated functions by number.

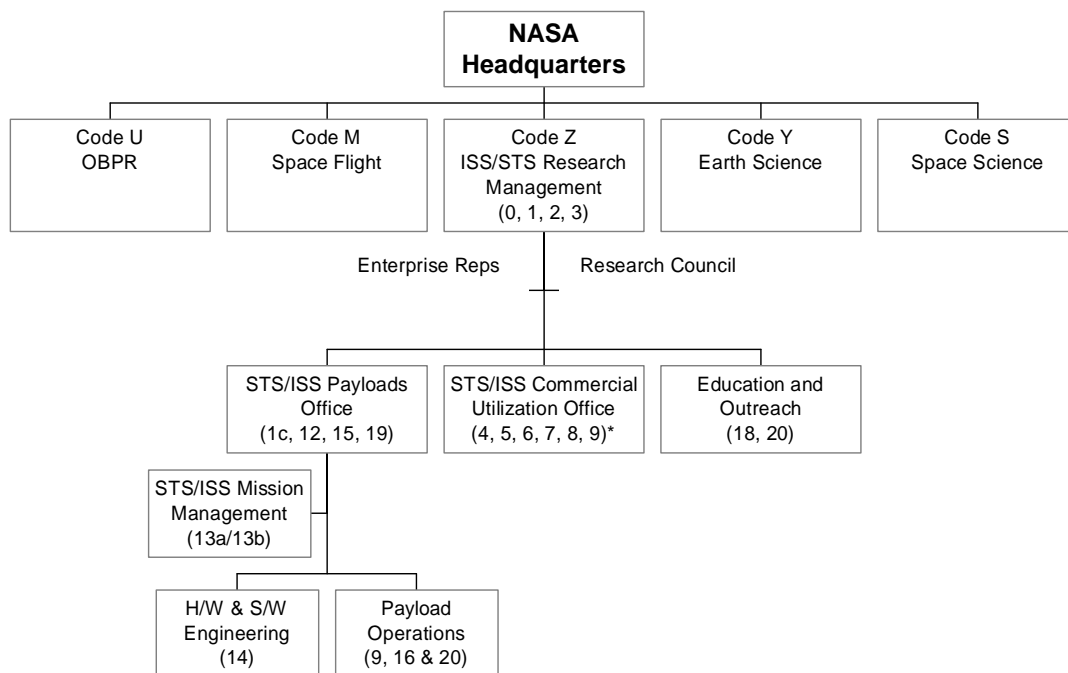


Fig. 1 Organization and Functions

The “Code Z” Utilization Management Enterprise will functionally be responsible for defining and implementing policy and strategic plans, managing research utilization, preparing and allocating budgets and supporting science selection process (do selection process for Commercial). The STS/ISS Payloads Division within Code Z will be responsible for those activities currently coordinated by or vested in the JSC OZ organization, specifically:

- Managing integrated research utilization
- Certifying safety of research flight and ground systems
- Integrating user missions (physical integration at KSC)
- Recommending ISS preplanned product improvements.

Within the Payloads Division, the Mission Management Office will address: Advocacy, manifesting and resource allocation along with ISS research mission management. Supporting offices in the division will be responsible for the analytical tasks associated with payload engineering including both software and hardware and the payload operations which encompasses

- Maintaining and sustaining ground systems
- Integrating user missions (training and operations)
- Managing archival of research samples, data, and results.

Similar to the Spacelab era, the Development Centers representing the specific research disciplines, will be funded by their specific associated codes and be responsible for:

- Establishing payload/experiment requirements and feasibility
- Developing cost, schedule, and risk assessments
- Developing and qualifying flight research systems
- Maintaining and sustaining flight research systems.

Rationale: The rationale for development of this Enterprise is principally to address customer concerns, e.g., simplified interfaces with goals to:

- Integrate strategic and tactical planning for flight research across multiple vehicle platforms
- Provide focused integration activity for ISS research rather than the distributed approach of today for the total Program through integration of International and domestic activities along with short duration and long duration microgravity activities (e.g., ISS, STS) and multiple platforms
- Simplify existing processes for efficiency through centralization
- Provide an integrated voice for **all** researchers
- Standardize documentation and templates for **total S/T/C** community
- Ensure flight and increment assignments are based on Agency priorities
- Integrate flight manifesting and mission management to optimize use of resources and flight opportunities on multiple vehicles and platforms

As an integrated entity, the Code would be established consistent with the Guiding Principles and the Vision of OBPR, which was co-authored with S, Y, and M and focuses on research and will additionally:

- Provide centralized assessment of all platforms available for research thus optimizing research opportunities.
- Consolidate activities within one centralized organization to provide better response to research community.
- Provide focused integration activity for ISS research rather than the distributed approach of today
- Integrate strategic and tactical planning for flight research

Key Aspects: The key aspects of the Reinvent NASA Option are akin to today's NASA baseline since this is still part of NASA. Legalities, procurement restrictions, requirements are a result of the 1958 Space Act and functions of a government agency. The Reinvent Option still maintains the characteristics of:

- Management and leadership by civil servants supported by contractors
- Ability to act directly with the International community
- Capability to readily interact with other Government Agencies (DOE, DOD, NIH, etc.)

The Reinvent Option's key aspects (differing it from today) is emphasis and provision of single point of contact, e.g., a Customer Focal Point, to the researcher that isolates the researcher from the process and totally focuses on the customer. This is accomplished through the:

- Smart Integration Team that interfaces with the customer and external entities
- Utilization Management Office which is elevated to ISS and STS Program equivalent stature which provides greater advocacy and visibility to the Agency (and public) of the relevance of STS/ISS Utilization Management. This organization can readily
 - Serve the customers OBPR, S, Y, M, R, thus the science enterprises efforts are not diluted from their science focus
 - Negotiate and accommodate International barter agreements and allocation of resources
 - Provide resources to facilitate dissemination of research results and benefits of STS/ISS
 - Be supported by Scientific user groups external to NASA
 - Provide guidance in strategic research goals in the different research disciplines.

Other key aspects include:

- Science focus through IPA's (rotating) from science community which comprise a STS/ISS Research Council
- Science selection as a standardized process across the NASA codes
- Extended sustaining engineering responsibility in Code Z e.g., EXPRESS Rack, Habitat Holding Rack (this does not control inserts), and multi-user racks and pallets which leads to a uniform approach in determining status and availability of research facilities.

Transition Strategy: The transition strategy for the Reinvent Option is dependent on NASA management approval and acceptance. Nominally, transition should take no longer than one year. Personnel from current ISS participating codes would matrix to support the transition activities

Strengths and Weaknesses: Major strengths and weaknesses of the Reinvent Option are shown in Table 1.

Table 1. Strengths and Weaknesses

<u>Option Strengths</u>	<u>Option Weaknesses</u>
<ol style="list-style-type: none"> 1. Integrated flight research strategy across NASA, other government agencies, and platforms 2. Customer focus with Smart Integration Team responding to customer needs 3. Current human capital strengths and experience within NASA utilized 4. STS/ISS Research Council comprised of rotating IPAs representing of external science community Integrated flight research strategy across NASA, other government agencies, and platforms 5. STS/ISS Research Council comprised of rotating IPAs representing of external science community 	<ol style="list-style-type: none"> 1. Perception as status quo 2. Perceived or real difficulty in reorganizing NASA 3. Lack of direct jurisdiction by research codes over research flown on each and every increment 4. Does not free CS immediately for other Agency initiatives